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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,958	11/19/2001	Naoki Oguchi	FUJZ 19.185	9665
26304	7590	01/10/2006	EXAMINER	
KATTEN MUCHIN ROSENMAN LLP			LEE, ANDREW CHUNG CHEUNG	
575 MADISON AVENUE			ART UNIT	
NEW YORK, NY 10022-2585			PAPER NUMBER	

2664

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/988,958

Applicant(s)

OGUCHI ET AL.

Examiner

Andrew C. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 October 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-13 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 5, 9, 11 are rejected under 35 U.S.C. 102(e) as being anticipated by McCanne (US 6611872 B1).

Regarding claims 1, 5, 9, McCanne discloses the limitation of a virtual network construction method, system, apparatus comprising the steps of generating and multicasting control packets each having set a multicast address predetermined per virtual network in first relaying apparatuses originating a virtual network within a public data communication network (Abstract, lines 1 – 7; column 4, lines 54 – 62; column 6, lines 14 – 16, lines 19 – 26; lines 37 – 51), and establishing virtual links to the first

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relaying apparatuses which are transmitting sources of the control packets upon receipt thereof and returning reply packets through the virtual links in second relaying apparatuses belonging to the multicast address group, whereby the virtual links are established between all pairs of the first and the second relaying apparatuses belonging to the multicast address group to construct the virtual network (column 6, lines 37 – 51; column 7, lines 9 – 31; column 9, lines 24 – 42).

Regarding claim 11, McCanne discloses the limitation of the relaying apparatus as claimed in claimed further comprising means for generating a routing table for each of a plurality of virtual networks logically independent of one another, and means for performing a packet relay of each virtual network based on the routing table (column 6, lines 37 – 51; column 17, lines 30 – 43; column 18, lines 24 – 27).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 6, 10, 3, 7, 12, 4, 8, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCanne (US 6611872 B1) in view of Ylonen et al. (US 6438612 B1).

Regarding claims 2, 6, 10, McCanne discloses the limitation of a virtual network construction method, system, apparatus comprising the steps of generating and

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multicasting control packets each having set a multicast address predetermined per virtual network in first relaying apparatuses originating a virtual network within a public data communication network (Abstract, lines 1 – 7; column 6, lines 14 – 16, lines 19 – 23; lines 38 – 50). McCanne does not disclose expressly the virtual network construction method, system, apparatus as claimed in claimed wherein the second relaying apparatuses authenticate the control packets received. Ylonen et al. disclose the limitation of the virtual network construction method, system, apparatus as claimed in claimed wherein the second relaying apparatuses authenticate the control packets received (Abstract, lines 12 – 19; column 7, lines 65 – 67; column 8, lines 1 – 9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McCanne to include the virtual network construction method, system, apparatus as claimed in claimed wherein the second relaying apparatuses authenticate the control packets received such as that taught by Ylonen et al. in order to provide secure transmission of data packets in a network comprising so-called virtual routers (as suggested by Ylonen et al., see column 1, lines 8 – 10).

Regarding claims 3, 7, 12, McCanne discloses the limitation of a virtual network construction method, system, apparatus comprising the steps of generating and multicasting control packets each having set a multicast address predetermined per virtual network in first relaying apparatuses originating a virtual network within a public data communication network (Abstract, lines 1 – 7; column 6, lines 14 – 16, lines 19 – 23; lines 38 – 50). McCanne does not disclose expressly the virtual network construction method, system, apparatus as claimed in claimed wherein the virtual links

comprise IP tunnels. Ylonen et al. discloses the limitation of the virtual network construction method, system, apparatus as claimed in claimed wherein the virtual links comprise IP tunnels (column 2, lines 17 – 23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McCanne to include the virtual network construction method, system, apparatus as claimed in claimed wherein the virtual links comprise IP tunnels such as that taught by Ylonen et al. in order to provide secure transmission of data packets in a network comprising so-called virtual routers (as suggested by Ylonen et al., see column 1, lines 8 – 10).

Regarding claims 4, 8, 13, McCanne discloses the limitation of a virtual network construction method, system, apparatus comprising the steps of generating and multicasting control packets each having set a multicast address predetermined per virtual network in first relaying apparatuses originating a virtual network within a public data communication network (Abstract, lines 1 – 7; column 6, lines 14 – 16, lines 19 – 23; lines 38 – 50). McCanne discloses the limitation of the virtual network construction method, system, apparatus as claimed in claimed wherein the virtual links comprise MPLS tunnels. Ylonen et al. discloses the limitation of the virtual network construction method, system, apparatus as claimed in claimed wherein the virtual links comprise MPLS tunnels (column 2, lines 53 – 59). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McCanne to include the virtual network construction method, system, apparatus as claimed in claimed wherein the virtual links comprise MPLS tunnels such as that taught by Ylonen et al. in order to

provide secure transmission of data packets in a network comprising so-called virtual routers (as suggested by Ylonen et al., see column 1, lines 8 – 10).

### ***Response to Arguments***

6. Applicant's arguments filed 10/12/2005 with respect to claims 1 – 13 have been fully considered but they are not persuasive.

Regarding claims 1, 5, and 9, Applicant argues reference McCanne does not teach generating and multicasting control packets each having set a multicast address predetermined per virtual network are transmitted over the native network. Examiner contends McCanne discloses generating and multicasting control packets each having set a multicast address predetermined per virtual network in first relaying apparatuses originating a virtual network within a public data communication network (“allowing multicast routing in the Internet to be performed at the applicant level. The overly protocol uses ‘native’ Internet multicast and multicast routing protocols to route information, according to overlay routing tables. Overlay groups are mapped to native multicast groups to exploit native multicasting in regional or local forwarding domains ( Abstract, lines 1 – 7); column 6, lines 14 – 16, lines 19 – 23; lines 38 – 50).

Applicant argues reference McCanne does not teach “the virtual links are establish between all of the first and the second relaying apparatuses belonging to the multicast address group”. Examiner contends McCanne discloses “the virtual links are establish between all of the first and the second relaying apparatuses belonging to the multicast address group” as “senders can attach named values to an overly multicast

group which is published into and across overlay network, allowing other group members as well as network entities to query this 'database' of state. Each..... when the owner modifies the value" (column 6, lines 37 – 51); "Applicants send and receive OMN packets through an overlay router that manages the LVIF. The overlay router transforms each native multicast packet into an overlay packet by encapsulating .....address of a nearby overlay router can be queries using a directory service (column 7, lines 9 – 31); column 9, lines 24 – 42).

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-



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3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Ajit Patel  
Primary Examiner

ACL

Dec 29, 2005